

# External Technical Review Summary

United States Department of Energy Office of Environmental Management (DOE-EM)

## External Technical Review of the Proposed On-Site Disposal Facility(OSDF) at the Paducah Gaseous Diffusion Plant

### Why DOE-EM Did This Review

The Paducah Gaseous Diffusion Plant (PGDP) is an active uranium enrichment facility that was placed on the National Priorities List. DOE is required to remediate the PGDP in accordance with the Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA). DOE is evaluating alternatives to dispose of waste generated from the remedial activities at the PGDP. One option is to construct an on-site disposal facility (OSDF) meeting the CERCLA requirements.

*The objective of this review was to provide input on (1) the most effective use of the existing RCRA Subtitle D landfill, (2) site considerations such as seismic and brown versus green field, (3) the public communication plan, (4) future public use options, and (5) the baseline schedule.*



Paducah Gaseous  
Diffusion Plant

### What the ETR Team Recommended

1. Evaluate the stakeholder, regulatory, and cost issues associated with using the Subtitle D landfill for: (a) diversion of non-hazardous and non-radioactive wastes from the OSDF, (b) temporary storage of waste prior to disposal in the OSDF, and/or (c) consolidating the two disposal activities into the OSDF.

2. The brownfield site is the most logical for the OSDF. If chosen, DOE should consider innovative monitoring systems.
3. For site selection, DOE should consider the recommendations of the US Army Corps of Engineers to include both deterministic and probabilistic approaches with sensitivity analyses versus a hybrid approach. They further suggest additional site testing.
4. The public communication plan should include forming stakeholder groups that are inclusive of those affected and steps to ensure open communication paths.
5. Public use should preclude access to areas with appurtenances and to the containment cap.

### What the ETR Team Found

Since the independent review occurred prior to any design, the findings were limited. However, the team felt that the Subtitle D landfill would pose a long term risk to DOE and removal/consolidation with the OSDF should be considered. Although the use of a brownfield site is logical for the Paducah OSDF, there will be considerable regulator and possibly stakeholder hurdles to address.

The team also found that at the current stage there were no evident problematic issues from a project management perspective. The ultimate public use of the closed CERCLA disposal facility should be carefully considered and be consistent with the final design and closure of the facility.

To view the full ETR reports, please visit this web site:  
<http://www.em.doe.gov/Pages/ExternalTechReviews.aspx>

July 2009

*The purpose of an External Technical Review (ETR) is to reduce technical risk and uncertainty. ETRs provide pertinent information for DOE-EM to assess technical risk associated with projects and develop strategies for reducing the technical risk and to provide technical information needed to support critical project decisions. Technical risk reduction increases the probability of successful implementation of technical scope. In general, ETRs assesses technical bases, technology development, and technical risk identification and handling strategies.*



**EM Environmental Management**

safety ❖ performance ❖ cleanup ❖ closure

[www.em.doe.gov](http://www.em.doe.gov)